LONG ISLAND BOTANICAL SOCIETY NEWSLETTER

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Sleuthing for Rare Plants on Fishers Island, Suffolk County, New York

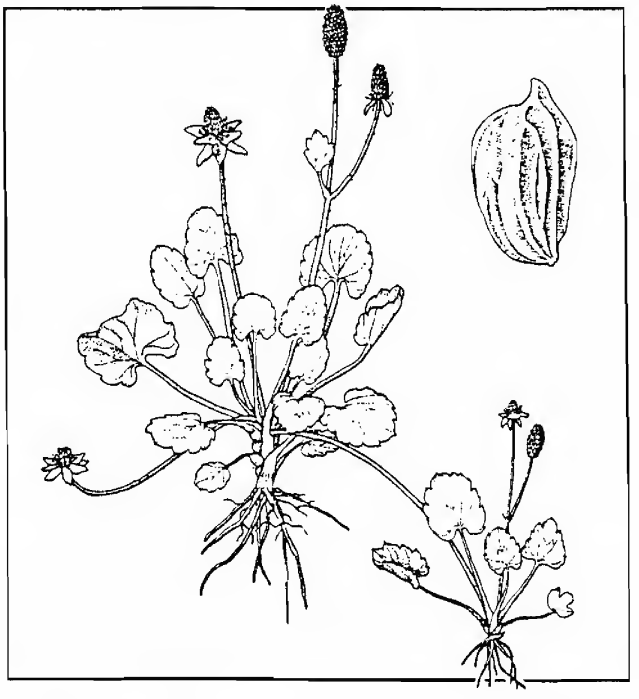
Edwin H. Horning
(H. L. Ferguson Museum)

From early on I have had an interest in plant life. As a boy, I spent time during summers pulling unwanted plants from the corn fields on my grandfather's farm and gathering hay from the hay lots (commonly called "haying -it"). But it was much more exciting to look for and find spring wildflowers such as hepatica, trillium, jack-in-the-pulpit, and others growing on the wooded hillsides of western New York State. It was a ritual of springtime to gather leeks from the same hillsides and cowslips from the swamps, now called the wetlands. During the summer I gathered strawbemes, raspberries and blackberries. In the fall, butternuts were gathered and stored in the attic. In late winter sap was collected from the sugar maples and evaporated over an outdoor fire into maple syrup.

In 1951 I came to Fishers Island to teach in the school. On a summer day I made a visit to one of my neighbors, Charles Hanmer. He had lived on the Island during summers from early in the 1900's and had collected plants from that time on. In 1935 Charles Hanmer compiled a list of plants that he had collected on Fishers Island, and in 1940 the list was published in *Torreya,* the botanical journal of the Torrey Botanical Club.

In the introduction of his article, Hanmer had this to say about his plant inventory: "The list contains about five hundred qpecies, and I feel that it is fairly complete, although I am sure that more species will be added from time to time. Since 1926, a number of species have become very rare, or have disappeared entirely from the Island's flora. This refers largely to swamp plants, which could not survive the severe draining, with the resultant growth of briars and small trees. Much credit is due my friend, Mr. Charles A. Weatherby, Senior Curator of the Gray Herbarium, Cambridge, Massachusetts, for his careful determination of the species unknown to me."

Following the publication of Hanmer's list in 1940 until 1999, a period of 59 years, significant changes have occurred on Fishers Island. The Hurricane of 1938 had a sig cant impact upon the island's ecology, and a considerable amount of development has taken place. The plant life has also changed, some species have been lost but many others have been gained. Among those lost



Seaside Crowfoot (*Ranunculus cymbalaria*)
Collected on Fishers Island by Charles Hanmer (1940), but not recently observed
Illustration from Mitchell & Dean (1982)

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Highlights

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were orchids such as the Grass Pink (*Calopogon tuberosus*), Green Woodland Orchid (*Platanthera clavellata*) and Rose Pogonia (*Pogonia ophioglossoides*). Many other species have also disappeared from the island, including Seaside Crowfoot (*Ranunculus cymbalaria*), Choke-cherry (*Prunus virginiana*), Bird's-foot Violet (*Viola pedata*), Large Cranberry (*Vaccinium macrocapon*), New England Aster (*Aster novae-angliae*), Sickle-leaved Golden Aster (*Pityopsis falcata*), and others. Some twenty years ago I observed the last cranberry growing on the island; the other species must have been gone before my arrival.

Other plants previously reported by Hanmer to be plentiful have been reduced to just a few individuals. One of these plants is the Wood Lily (*Lilium philadelphicum*) which was reported by Hanmer to be abundant in the open Fort Meadows; currently, I know of only two plants from the site, both flowering in July. Frostweed (*Helianthemum canadense*) was reported to be common throughout the island; at the present time I know of only two locations where only a very few plants can be found. Wild Suawberry (*Fragaria virginiana*) was picked in large quantities in the Fort Meadow as related to me by Ann Wall who was one of the pickers. This plant is still found growing along the highway but in very small numbers, I could never find enough for a strawberry shortcake. Another plant Hanmer found to be common was the Carrion Flower (*Smilax herbacea*), but I have found it on only two or three occasions.

During the past century, many more plant species have been added to the flora of Fishers Island than lost. One species that is now abundant along roadsides and elsewhere is Oriental Bittersweet (*Celastrus orbiculata*). This species was not reported from the island by Hanmer although the native bittersweet (*C. scandens*) was listed as common. Today, one is hard pressed to find *C. scandens* on Fishers Island. Another invasive plant, the Japanese Honeysuckle (*Lonicera japonica*), was already listed as being very common and well established, and in 1999 it is even more thoroughly entrenched on the island. Hanmer listed Wild Black Cherry (*Prunus serotina*) as the most common tree and today it retains that designation. But today's cherry trees are not the tall trees seen in the forests of western New York, they are shorter, spread out and many have viral growths.

During my years of botanizing on Fishers Island, each time that I found a plant new to me I went to Hanmer's list. I once found, near the edge of a pond, a goldenrod which I determined to be Elliott's Goldenrod (*Solidago elliottii*). I checked the list and found that Hanmer had not previously reported it. Later Bob Zaremba verified the identification. Near the same pond I found Slender Blue Flag (*Iris prismatica*) which Hanmer listed as occasional; today, there are only two stations of it at the Airport Field (formerly known as the Fort Meadow).

Among the rocks on the beaches is found the Silverweed (*Potentilla anserina* subsp. *pacifica*) which was listed by Hanmer as "common on sea beaches" and it still is. Another beach plant formerly listed as common is Beach Plum (*Prunus maritima*), but it is much less common today. I have read reports of both purple and yellow fruited individuals, but I have never seen the yellow fruited one. On a late summer day I found on a drying pond a sedge with red roots, *Cyperus erythrorhizos*; I later found it at a second pond in late summer. Another plant found near a pond close to the shore was the rare Golden Dock (*Rumex maritimus* var. *fueginus*). I am quite sure thar these last two plants were not on the island in Hanmer's time or he would have found them. A goldenrod found at only one location on the island is Showy goldenrod (*Solidago speciosa*); it also is not on Hanmer's list Another goldenrod, Silver-rod (*S. bicolor*) has been found but once as has yet another, the Sweet Goldenrod (*S. odora*).

On 11 July 1985, Bob Zaremba visited Fishers Island and for two days he and I looked for rare plants. I shared with him all of my earlier discoveries and together we added several new species to the Island's flora. Among the plants that were new to me were three species of Spikerush (*Eleocharis obtusa, E. olivaceae, E. parvula*), Winged Sedge (*Carex alata*), Bicknell's Frostweed (*Helianthemum bicknellii*), and Poison Sumac (*Toxicodendron vernix*).

Also in 1985, archaeologists from the New York State Museum, under the leadership of Robert Funk, began a study of native American habitation sites on Fishers Island in collaboration with the H. L. Ferguson Museum of Fishers Island. Gordon Tucker, a botanist at the State Museum, also visited to investigate the plant life. I took Gordon on a tour of the Island and before the day's end Gordon suggested that we compile a flora of Fishers Island. He warned that it would take years to complete and asked if I was interested? Without even thinking I agreed to work with Gordon on the flora of Fishers Island. I was ready and eager.

In May, 1990, we began work on the new flora. Gordon became a frequent summer guest at our home and we would spend long hours collecting plants in the fields. We were most fortunate that Charles Hanmer had published his study for it was to be our initial guide. Gordon also was aware of other botanists who had visited the island and was familiar with their plant collections in various herbaria. Among those botanists were Harold St. John, Bill Link, Alexander W. Evans, and others. As of 1998 we had found over 800 species of plants on Fishers Island, a very significant increase compared to the 500 some species reported by Hanmer.

In 1993 we submitted a report to the Suffolk County Department of Health and The Fishers Island Conservancy,

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entitled: *Fishers Island Water Supply and Watershed Study: Ecological Component.* In the report we commented on a remarkable number of rare plants occuring on Fishers Island. The following list appeared as Table 2 in our report:

Endangered, Threatened, and Rare Plants
in the Watershed Area of Fishers Island, NY

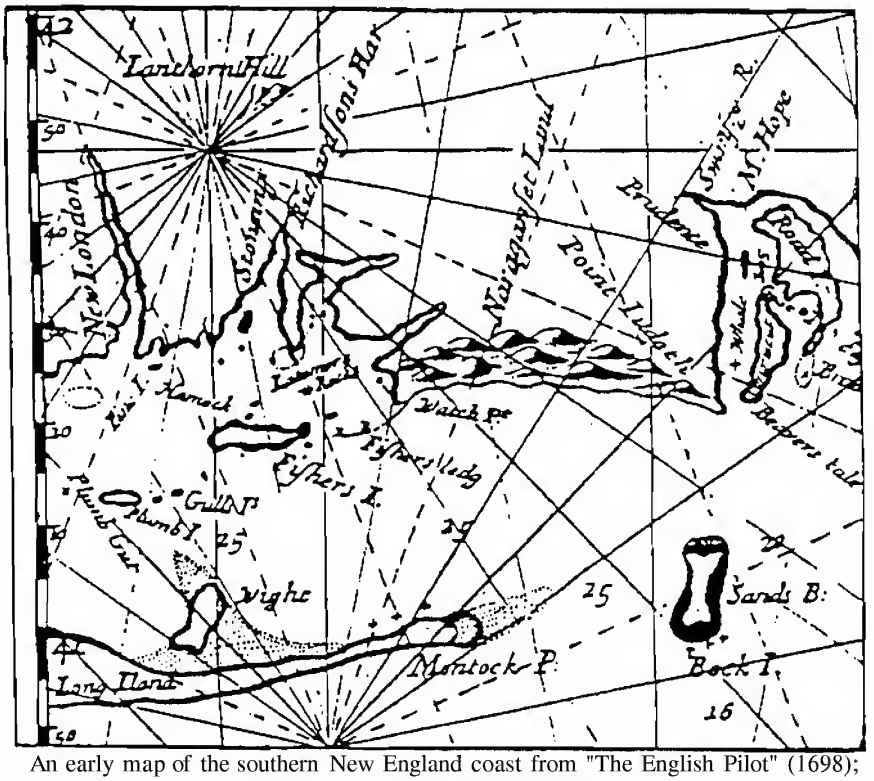
Potamogeton pulcher	Spotted Pondweed
Carex emtnonsii	Emmons Sedge
Cyperus odoratus	Rusty Flatsedge
Wolffia brasiliensis	Watermeal
Spiranthes vernalis	Ladies-tresses
Rumex maritimus var. *fueginus*	Golden dock
Chenopodium rubrum	Red Pigweed
Chenopodium strictum	Pigweed
Potentilla anserina subsp. *pacifica*	Silverweed
Helianrhemum dumosum	Bushy Rockrose
Myriophyllum pinnatum	Green Parrot Feather Milfoil
Angelica lucida	Seaside Angelica
Hottonia inflata	Featherfoil
Veronica peregrina	Neckweed
Aster vimineus	Osier-Aster

There was one certain plant that was our Holy Grail. From the beginning of our study we searched for it. Charles Hanmer had found it and had listed it as common along the sea beaches. We checked most of the beaches where we thought it might be. We found its near relative, a plant very similar in general appearance, but the one that we were looking for continued to elude us. During one of Gordon's visits in 1996, we looked for it on the east end of the Island across the Sound from Stonington, Connecticut Gordon had learned that in 1885 William Setchell of Stonington had found the plant on Fishers Island and Gordon figured that it might have occurred on an east end beach. We did not find it.

In 1997 Gordon returned to the Island and we did a study for a proposed bicycle path. On the early evening of July 31, while Katherine and I prepared dinner Gordon took a short walk. A short while later he returned and exclaimed, "I found it, I found *Ligusticum scothicum!"* [Scotch Lovage]. He had found it at the foot of a north facing bank near a spring, along the upper shore of a beach deep in Hay Harbor. It was a cool spot. It was not more than 1/4 mile from my home and just where it should be.

Gordon's last visit was on 4-7 August 1998. Hanmer had said that he was sure that more species would be added to the flora from time to time. We added two more. One was the American Hazelnut (*Corylus americana*), the other was an unidentified aster possibly in the *divaricatus* group; we plan to send a specimen to Eric Lamont for identification.

So what have we learned from studying the past and present flora of Fishers Island over a 100 year period? We have observed that the plant life of Fishers Island is dynamic, populations come and go, they increase and decrease in size from year to year. Natural forces such as hurricanes and northeasters, droughts and flooding, insect infestations, etc., can significantly alter the physical structure of ecosystems resulting in opportunities for plants to colonize new sites, and conversely, resulting in the loss of habitat for other species. But by far, the greatest single impact upon the plant life of Fishers Island during the past 100 years has been man. The irreversible destruction of habitat due to development and the alteration of natural wetland systems has resulted in significant changes in the island's flora. Fortunately, outstanding examples of natural communities still remain on Fishers Island. About 45 species of rare, endangered, and threatened vascular plants occur on the island, making this site one of New York State's most significant botanical hot-spots.



An early map of the southern New England coast from "The English Pilot" (1698); Fishers Island is visable just left of center.

Mystery Spot

Ray Welch

When we head out into the field it's generally the rule that we like to go to places with interesting flora, where we can creep through the underbrush or slosh in a swamp and have a good chance of meeting old familiars and, with luck, some choice plants. But I have recently found an inverse of this, a site that's provoking not for an abundance of plants, but for their lack.

I have visited the site in Yaphank called "Warbler Woods" for over a quarter of a century. Here there are fine oak-hickory-maple woodlands on the Ronkonkoma Moraine that attract birders in late April and early May, but botanizing is less season dependent. There are several so-called "vernal" ponds in these woods, although a rainy year will let water persist in all seasons; the largest pond supports a now-you-see-it, now-you-don't population of featherfoil, *Hottonia inflata,* a New York Heritage element.

Farther along in the woods, while birding many years ago, I saw through the trees an opening that drew me off the trail. It was an open spot, completely devoid of plants over a roughly circular area perhaps 15 meters across. The ground was sandy gravel, and a quarter-century back, looked unvisited and there was no clear evidence of human disturbance, unless the spot itself was one. The surrounding woods had young oaks and some red cedar and a pitch pine or two.

My occasional visits over the years showed little change in the spot, and there was no sign of invasion by either shrubs or trees, except a few tentative shrubs, blueberry and bayberry, at the very edge. Unfortunately, although the woods are now substantially in the hands of the County, inappropriate use has burgeoned in the past few years, and now an unofficial trail runs across the site, a trail used by ORVs, and the opening lets them do wheelies and spins that tear and churn at the sandy gravel, so now there's no chance of observing any future natural succession.

Curious about the site, I investigated aerial photographs to see when the clearing might have originated. I was surprised to see it clearly on some 1961 aerials, and astonished to see it on some 1929 ones, looking about the same size. The site has resisted colonization and succession for two-thirds of a century. What can make a site so "balky," is irkingly obscure. Right at the edge of the clearing is a mature pitch pine, and considering the haste with which pitch pine hustles itself onto sterile, sandy soils, the absence of any seedlings seems perverse. I have no useful explanation. . . it is, of course, probably a UFO landing site, an explanation that would easily satisfy a certain segment of the American people.

Notes on Two Exotic Waifs from Long Island

Stephen Young
(N.Y. Natural Heritage Program)

Tribulus terrestris, puncture vine, is a member of the tropical family Zygophyllaceae, the Creosote-bush Family. Members of this relatively small family (about 250 species) mostly occur in arid or saline habitats (species of *Larrea,* creosote-bush, dominate some of the warm deserts of both North and South America).

Puncture vine is a prostrate, mat-forming annual especially noted for its small, hard, spiny fruits. It is a native of the Mediterranean Region and is well established as a roadside weed in western United States.

During the past two years, I have found plants of *T. terrestris* at Breezy Point, Queens County, during searches for *Amaranthus pumilus.* This year [1998] there was a plant 10 feet in diameter! It was last collected on Long Island in 1879 at Hunters Point, Queens. More recently, it was seen in 1961 at the port of Albany, and is probably a hitchhiker in ballast waste.

Bassia hyssopifolia, a member of the Goosefoot Family (Chenopodiaceae), was collected by Joseph Monachino in three locations in Queens County in the 1940s, but has not been reported since in New York. Bob Zaremba and I observed a large colony of plants at the marina at Long Beach Peninsula west of Stony Brook this past fall [1998]. It is a native of coastal Europe where it occurs in saline or brackish soils, and is introduced along the coast from Massachusetts to Maryland and also in western United States.

Society News

January Meeting. Members Night: **Rich Kelly** showed slides of assorted showy wildflowers and an array of rare butterflies from Long Island; **Zu Proly** presented a short travelogue of her recent trip to Iceland; **Skip Blanchard** showed slides of roadside wildflowers from the hill country of Texas; **Steve Clemants** showed slides of bizarre and wonderful plants from South Africa; **Barbara Conolly** talked about her love for big trees and concluded the evening by reading three poems she had composed.

February Meeting. **John Turner** presented a program on the history of the cranberry industry on Long Island. In 1870, Warren Hawkins and Bull Overton of Bayport experimented with cranberry plant cultivation with highly successful results. In 1885, two brothers, M. H. and S. H. Woodhull, purchased land near present day Sweezy's Pond and Wildwood Lake in Riverhead and began preparing it for cranberry cultivation. By the 1920s, ten major bogs were in operation on Long Island. By 1965, only the old David marsh in Calverton was still in operation. In 1974, this bog also ceased commercial production. Long Island's cranberry days were over.

March Meeting. **Eric Morgan** presented a program on the history of the Clark Botanic Garden located in Albertson, Nassau County. The 12 acre Garden is the former estate of Grenvill Clark, a noted attorney, author, and advisor to president Franklin D. Roosevelt. In 1966, Mr. Clark donated his property to the Brooklyn Botanic Garden. The site was developed into a "satellite garden" of BBG, but due to financial resuaints the property was eventually deeded to the Town of North Hempstead. Today, the Garden specializes in native plant restoration, offers extensive educational programs, and maintains specialty gardens beautifully complemented by ponds and streams and a network of garden paths.

April Meeting. **Don Riepe** presented a program on the natural history of Jamaica Bay Wildlife Refuge. Don's spectacular photographs told the story of intricate biological interactions between plants and animals; highlights included interactions among butterflies, birds and plants. Natural ecological communities were discussed along with "urban ecosystems" which only recently have begun to be studied. The impact of migratory and nesting birds on urban society was discussed, with special emphasis on the conflict between the large colony of laughing gulls nesting in the extensive marshlands adjacent to Kennedy International Airport.

Executive Board Meeting

A meeting of the Executive Board will be held on 11 May 1999 at 6:15 pm (before the monthly meeting and program) at the Bill Patterson Nature Center, Muttontown Preserve. All members are welcome.

Please! Help a Grad Student

Only one LIBS member responded last month to **Wei Fang's** request for locations of large stands of Norway Maple (Acer *platanoides*) and Tree of Heaven (Ailanthus *altissima*) on L.I. and the greater metropolitan region. Come on! Please, share your knowledge by contacting **Wei Fang** today at the Dept of Ecology & Evolution, SUNY at Stony Brook, Stony Brook, NY 11794-5245 [tel: 516/216-2177; e-mail: weifang@life.bio.sunysb.edu].

Plant Fossil Exhibit

Dr. Andrew Greller and **Michael Goudket** have organized an exhibition of plant fossils entitled, "A Forest Beneath Our Feet," at the Queens College Environmental Center at Caumsett State Park on Lloyd Neck, Huntington Township. Plant fossils in this exhibition were collected from the North Shore of LI, mainly at Caumsett, but some were also at Port Washington & Glen Cove. The original description of these plants was authored by Arthur W. Hollick in 1906 as, "The Cretaceous Flora of Southern New York and New England," published by the United States Geological Survey as Volume 50 in its monograph series.

Field Trips

[Please see the enclosed flier for specific information]

22 May **1999** (Saturday), 9:00am. Wittingham Tract, Newton, New Jersey. Leader Otto **Heck** (908/996-2598). Focus: Limestone Sinkholes, Ferns, Spring Wildflowers.

19 June **1999** (Saturday), 9:00am. West Hills County Park, Huntington, Suffolk County. Leader: Tom Meoli (5161427-9458). Focus: Southern species of naturalized wildflowers and trees at Walt Whitman's former stomping grounds near Jayne's Hill.

10 July 1999 (Saturday), 10:00am. Wertheim National Wildlife Refuge, bordering the Carmans River, Suffolk Co.. Leader: Dr. Robert **Parris**. Focus: Vegetative responses to the refuge's prescribed burn and management program. For more information contact Al Lindberg at 5161-571-8500 (days) or 5161922-0903 (evenings).

LONG ISLAND BOTANICAL SOCIETY
Founded: 1986; Incorporated: 1989.

The Long bland Botanical Society is dedicated to the promotion of field botany and a greater understanding of the plants that grow wild on Long Island, New York

President	Eric Lamont
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	Thomas Allen Stock
Hospitality	Beny Lotowycz
	Jane Blanchard
Editor	Eric Lamont

Membership
Membership is open to all, and we welcome new members. Annual dues are $10. For membership, make your check payable to LONG ISLAND BOTANICAL SOCIETY and mail to: Lois Lindberg, Membership Chairperson, 45 Sandy Hill Road, Oyster Bay, NY 11771-3111

PROGRAMS

11 May 1999 - 7:30 pm*
Dr. Steven Clemants
(Brooklyn Botanic Garden)
"Lessons from an Urban Flora"
Location: Bill Patterson Nature Center, Muttontown Preserve, East Norwich.

8 June 1999 - Annual LIBS Barbecue
Lois & Allan Lindberg will host this year's evening of activities
Location: Bill Patterson Nature Center, Muttontown Preserve, East Norwich.
please see the enclosed flier for specific information.]

*Refreshments & informal talk begin at 7:30pm, the meeting starts at 8pm. For directions to Muttontown Preserve please call 516-571-8500.

LONG ISLAND BOTANICAL SOCIETY
c/o Muttontown Preserve
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East Norwich, New York 11732